

REMARKS

In view of the foregoing amendments and the following remarks, reconsideration of the present application is respectfully requested.

Claims 1-12 are currently pending in the application. Claims 1 and 8 have been amended claim 7 has been canceled. All of the amendments are fully supported by the specification and figures of the application as originally filed, and therefore no new matter has been added.

Rejection under 35 U.S.C. §102(b)

Claims 1, 2, 3 and 7 were rejected under 35 U.S.C. §102(b) as being anticipated by Farnand et al. (US 5,274,732). Applicant respectfully traverses this rejection.

Claim 1 as amended recites a lens fixing structure for an optical module of a scanner, a multi-function printer, a fax machine or a copy machine, wherein the optical module has a housing, and the lens fixing structure is installed on the housing, and includes a slot structure for placing and fixing a lens therein, wherein the slot structure includes a first slot wall positioned on the housing; a second slot wall positioned on the housing and being parallel to the first slot wall, a first fixing gel loaded between the lens and the first slot wall; and a second fixing gel loaded between the lens and the second slot wall, wherein the second slot wall is substantially perpendicular to a surface of the housing and heights of the first

fixing gel and the second fixing gel relative to a surface of said housing are approximately equal, thereby balancing a torque on the lens.

Please refer to Fig. 2(b) and 2(c) (labeled Prior Art) of the present invention. In the prior art, when a lens is assembled in an optical module in a scanner, a multifunction printer, a fax machine or a copy machine, an angle 221 is always formed between the slot wall 23 and the vertical axis, and furthermore there is a height difference formed between the fixing gels at the two sides of the lens 20. Therefore, the lens 20 is inclined as shown in Fig. 2(c), such that the quality of the obtained image is bad. The object of the present invention is to **balance the torque on the lens by increasing the height of the slot wall or balancing heights of the fixing gel in the slot structure.**

In contrast to the configuration claimed in claim 1, Farnand et al. disclose an optical assembly to overcome the **thermal problems** associated with the conventional supports (referring to Column 1 line 62 through Column 2 line 2 of Farnand et al.). However, the present invention provides a lens fixing structure for **balancing the torque on a lens.** Accordingly, the structure of the optical assembly disclosed by Farnand et al. is different from those of the lens fixing structure as claimed in claim 1. The differences between the disclosure of Farnand et al. and Applicants' claimed invention are illustrated as follows:

The Examiner asserts that Farnand et al. disclose a "lens (38)" placed in a "slot structure" including "a first slot wall (40)" and "a second slot wall" (not shown), which is perpendicular to "a housing (36)". The Examiner further asserts that "Figure 2 shows only one side of the structure, this is duplicated on the other side". Applicants respectfully disagree. Farnand et al. fail to suggest or disclose a second slot wall substantially perpendicular to a surface of a housing, as recited in claim 1. Applicant respectfully submits that a second slot wall is not disclosed in the Farnand et al. patent. It is plain from the plan view (Figure 3) that a single stiffner bar (40) receives a single face of a lens array (38). A heat conductive adhesive (54) attaches only one face of the lens array (38) to the stiffner bar (40) (See column 4, lines 11-13). Clearly, the opposite face of the lens array (38) does not make contact with a wall or any other structure. It follows that Farnand et al. fail to suggest or disclose a first fixing gel loaded between a lens and a first slot wall and a second fixing gel loaded between the lens and a second slot wall, the heights of the first fixing gel and the second fixing gel from said housing being approximately equal relative to a surface of the housing, as recited in claim 1.

In view of the foregoing, Applicants respectfully submit that claim 1 is patentable over Farnand et al. Claims 2-6 depend from claim 1, and are therefore also patentable over Farnand et al. Accordingly, withdrawal of the Section 102 rejection is respectfully requested.

Rejection under 35 U.S.C. §103(a)

Claims 4-6 and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farnand et al. (US 5,274,732) and further in view of Nagata et al. (US 6,239,421 B1). Applicants respectfully traverse this rejection.

Claims 4-6 are dependent from claim 1 and are patentable over Farnand et al. for the reasons discussed above with reference to claim 1. Nagata et al. fail to provide the disclosure deficient in Farnand et al. Specifically, Nagata et al. fail to suggest or disclose a second slot wall substantially perpendicular to a surface of a housing with first and second fixing gels having approximately equal heights relative to a surface of the housing, thereby balancing a torque on a lens. Accordingly, Applicants respectfully submit that claims 4-6 are patentable over Farnand et al. in view of Nagata et al.

Claim 8 recites a method for fixing a lens of an optical module of a scanner, a multi-function printer, a fax machine or a copy machine, wherein the lens is fixed in a slot structure including a first slot wall and a second slot wall, and a housing of the scanner is installed on the optical module and has a **selguide** thereon **parallel to the second slot wall**, in which the selguide is disposed on one side of the second slot wall opposing to that facing the slot structure and has a light emitting plane. The method includes: forming the second slot wall perpendicular to a surface of the housing; **increasing a first height of the second slot wall, wherein the first**

height is lower or equivalent to a second height of the light emitting plane; placing the lens into the slot; and loading a first fixing gel between the first slot wall and the lens and loading a second fixing gel between the second slot wall and the lens, wherein **the first fixing gel has a third height identical to a fourth height of the second fixing gel,** thereby balancing a torque on said lens.

As discussed above, Farnand et al. disclose an optical assembly to overcome the **thermal problems** associated with the conventional supports. Farnand et al. fail to suggest or disclose a selguide, a second slot wall, an increased height of the second slot wall, a first fixing gel loaded between the first slot wall and the lens and a second fixing gel loaded between the second slot wall and the lens, and the substantially identical heights of the first and the second fixing gels.

The object of Nagata et al. is to provide a **thin and small rod lens array** including a plurality of rod lenses, a first plate and a second plate for fixing positions of the rod lenses by sandwiching the rod lenses on both sides, wherein the thickness of the first and the second plates differ from each other (referring to Column 4 lines 42-46 of Nagata et al.). **The object of the present invention is to balance the torque on the lens by increasing the height of the slot wall or balancing heights of the fixing gels in the slot.** The object of Nakata et al. is clearly different from that of the present invention. Nagata et al. fail to suggest or disclose loading first and second fixing gels at heights which are substantially

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identical for balancing the torque on a lens, as recited in claim 8. Accordingly, combining Farnand et al. and Nagata et al. does not yield the invention recited in claim 8.

In view of the foregoing, Applicants respectfully submit that claim 8 is patentable over Farnand et al. in view of Nagata et al. Claims 9-12 depend from claim 8, and are therefore also patentable over the cited references. Accordingly, withdrawal of the Section 103 rejection is respectfully requested.

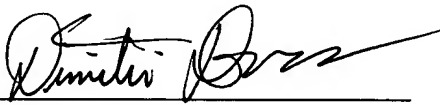
In view of the foregoing amendment and remarks, Applicants respectfully request reconsideration and submit that the present application, including claims 1-6 and 8-12, is in condition for allowance. An early notice to that effect is respectfully solicited.

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If for any reason the Examiner is unable to allow the application on the next Office Action and believes that an interview would be helpful to resolve any remaining issue, the Examiner is respectfully requested to contact the undersigned by telephone for the purpose of arranging an interview.

Respectfully submitted,

Su et al.

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